

## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

### Listing of Claims:

#### 1-39. (Canceled)

40. (Currently amended) A method of producing an oriented oxide superconducting film, comprising:

providing a metal oxyfluoride film on a biaxially textured substrate, said metal oxyfluoride film comprising the constituent metallic elements of an oxide superconductor in substantially stoichiometric proportions;

initiating conversion of ~~converting~~ the metal oxyfluoride into the oxide superconductor ~~film~~ in a processing gas having a moisture content of less than 1% by mass and a total pressure less than about 8 Torr ~~atmospheric pressure~~ under conditions that enable the removal of HF from the film surface, wherein the oriented oxide superconducting film exhibits c-axis texturing, ~~and wherein the total pressure is less than about 8 Torr.~~

#### 41. (Canceled)

42. (Previously presented) The method of claim 40, wherein the total pressure is less than about 1 Torr.

43. (Original) The method of claim 42, wherein the total pressure is less than about 0.1 Torr.

44. (Original) The method of claim 43, wherein the total pressure is less than about 0.01 Torr.

#### 45. (Canceled)

46. **(Previously presented)** The method of claim 44, wherein the total pressure is less than about 0.001 Torr.

47. **(Original)** The method of claim 40, wherein the processing gas consists substantially of water vapor and oxygen.

48. **(Canceled)**

49. **(Previously presented)** The method of claim 85, wherein the buffer layer comprises a member of yttria-stabilized zirconia,  $\text{LaAlO}_3$ ,  $\text{SrTiO}_3$ ,  $\text{CeO}_2$ ,  $\text{Y}_2\text{O}_3$ , and  $\text{MgO}$  and any combination of the above.

50. **(Original)** The method of claim 40, wherein the film has a thickness of at least  $0.3\mu\text{m}$ .

51. **(Previously presented)** The method of claim 50, wherein the film has a thickness of at least  $0.5\mu\text{m}$ .

52. **(Original)** The method of claim 51, wherein the film has a thickness of at least  $0.8\mu\text{m}$ .

53. **(Original)** The method of claim 52, wherein the film has a thickness of at least  $1\mu\text{m}$ .

54. **(Original)** The method of claim 40, wherein the superconductor comprises YBCO.

55. **(Original)** The method of claim 40, wherein the substrate comprises a ceramic.

56. **(Original)** The method of claim 55, wherein the ceramic is selected from the group consisting of YSZ,  $\text{LaAlO}_3$ ,  $\text{SrTiO}_3$ ,  $\text{CeO}_2$ , and  $\text{MgO}$ .

57. **(Previously presented)** The method of claim 40, wherein the substrate comprises a metal.

58. **(Original)** The method of claim 57, wherein the metal is selected from steel, nickel, iron, molybdenum, copper, silver, and alloys and mixtures thereof.

59. **(Original)** The method of claim 40, wherein the film has a Jc greater than 0.45 MA/cm<sup>2</sup>.

60. **(Original)** The method of claim 59, wherein the film has a Jc greater than 1 MA/cm<sup>2</sup>.

61. **(Original)** The method of claim 60, wherein the film has a Jc greater than 2 MA/cm<sup>2</sup>.

62. **(Original)** The method of claim 61, wherein the film has a Jc greater than 4 MA/cm<sup>2</sup>.

63-84. **(Canceled)**

85. **(Previously presented)** The method of claim 40, further comprising depositing a buffer layer on the substrate before providing the metal oxyfluoride film on the substrate.

86-89. **(Canceled)**

90. **(New)** The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 10 mTorr.

91. **(New)** The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 5 mTorr.

92. (New) The method of claim 40, wherein the water partial pressure during the step of initiating conversion is less than 1 mTorr.

93. (New) The method of claim 40, further comprising completing conversion of the metal oxyfluoride into the oxide superconductor in a processing gas having a moisture content greater than in the step of initiating conversion and a total pressure less than about 8 Torr.

94. (New) The method of claim 93, wherein the processing gas in the step of completing conversion has a water partial pressure between 150 mTorr and 350 mTorr.